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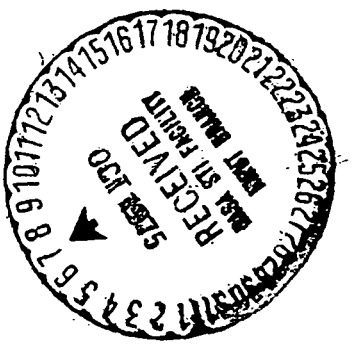
PRODUCTION TO START ON NEW FIREFIGHTER'S BREATHING SYSTEM

The Scott Aviation Co., Lancaster, N.Y., has announced it will begin production of a new, lightweight firefighter's breathing system based on concepts and hardware developed by NASA engineers from aerospace technology.

The announcement was made during the annual meeting of the International Association of Fire Chiefs held in Las Vegas, Nev.

Called the Scott Air-Pak 4.5, the new apparatus is considered an excellent example of the transfer of NASA-developed technology to help in the solution of pressing national problems.



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The new unit is the first major improvement in compressed air breathing systems in over 20 years. Although conventional units now in use are considered acceptable, they are cumbersome to wear and they tend to restrict a firefighter's mobility and vision.

Important new features of the improved system include:

- A 40 per cent weight reduction, using a lightweight air bottle
- An improved pack frame and harness, with the unit's weight carried on the hips rather than the shoulders
- A redesigned face mask permitting better vision
- Numerous design and human factors improvements

Weight reduction is achieved primarily by using a NASA-developed high pressure composite vessel consisting of an aluminum liner overwrapped with fiberglass -- technology originally developed for solid-propellant rocket motor cases.

NASA involvement in development of the new breathing unit began in 1970 when the need for an improved system was identified as the highest priority problem at a meeting of municipal officials from throughout the nation.

The meeting, organized and conducted by Public Technology, Inc., was held in order to identify local government problems that might be solved by using NASA-developed technology and expertise.

Following the meeting, NASA established a User Requirements Committee composed of fire officials, city managers and representatives of the National Bureau of Standards. The group was responsible for establishing performance standards and design concepts for the improved breathing system.

The NASA effort was carried out at the Johnson Space Center in Houston as an Engineering Applications Project under the Technology Utilization Program. A number of alternate design concepts were studied and eventually prototype units of the new system were built which meet NASA and regulatory agency standards.

Starting last year, prototype units were successfully field tested -- under actual firefighting conditions -- by selected units of the Houston, New York City and Los Angeles fire departments. Firefighters who used the new breathing system were impressed with its light weight and comfort.

For example, Jon King, Safety Coordinator for the Houston Fire Department, reported, "The NASA... system has produced a major breakthrough in reducing the combat weight that a firefighter carries into battle. With this system and other new technology applications, it is now possible to cut the combat weight of a firefighter in half."

Throughout the development and testing program of the NASA breathing system, information on all aspects of the effort was available to the fire service community.

Scott Aviation Co., a division of A-T-O, Inc., is the first manufacturer to announce production of an apparatus based on NASA's effort. NASA does not endorse commercial products developed as a result of its research. It does, however, encourage the widest possible use of its technological innovations.

Later this year, when a final report on the improved firefighter's breathing system is published, NASA will sponsor an industrial symposium at the Johnson Space Center to explore other possible commercial applications of all or part of the new system.

A photograph to illustrate this news release may be obtained by writing or phoning:

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